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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,517	07/28/2003	Seiji Funaba	NEKO 20.511	4289
26304	7590	04/07/2006	EXAMINER	
KATTEN MUCHIN ROSENMAN LLP			MAI, SON LUU	
575 MADISON AVENUE			ART UNIT	
NEW YORK, NY 10022-2585			PAPER NUMBER	
			2827	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/628,517	Applicant(s) FUNABA ET AL.	
	Examiner Son L. Mai	Art Unit 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4, 7-11, 15, 17-19, 21 and 25-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 10 is/are allowed.
- 6) ☒ Claim(s) 2-4, 11, 17-19 and 45-47 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 15, 21, 25-44 and 48-50 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03-23-06 has been entered. Accordingly claims 2-4, 7-11, 15, 17-19, 21, 25-50 are pending in the application.

Claim Objections

2. Claims 25, 46, and 49 are objected to because of the following informalities:

Claim 25, line 2, "said memory module" lacks antecedent basis.

Claim 46, line 2, "the connector " lacks antecedent basis.

Claim 49, line 2, "the connector " lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 2-4, 11, 17-19, and 45-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al. (U.S. Patent 6,172,895).

Regarding claim 2, Brown teaches a memory module (in figure 3) comprising a plurality of memory devices (28) which share a bus line (20) on a board (last RIMM card 54) wherein the bus line connects terminals of said plurality of memory devices in a stubless configuration and an end of said bus line is terminated (by resistor 52) and wherein at least a part of said bus line is a strip line (channel 20 comprises of strip lines).

Regarding claim 3, Brown discloses at column 8, lines 3-7, an effective characteristic impedance of said bus line is matched with a characteristic impedance of a line on a motherboard on which said memory module is mounted.

Regarding claim 4, Brown discusses at column 3, lines 1-9, at least one of said plurality of memory devices is a memory device in which a termination circuit is included and wherein the memory device in which said termination circuit is included terminates the end of said bus line.

Regarding claim 11, Brown shows in figure 3, signal terminals of said plurality of memory devices (28) connected in the stubless configuration are connected at one point on the bus.

Regarding claim 17, Brown teaches the memory devices (28 in figure 6) each have a package board (80) that makes an electrical connection between a memory chip pad and said board (82) and wherein said package board has a strip line for use as a signal line of said bus line in said package board. (See column 7, lines 27-32).

Regarding claim 18, Brown shows in figure 3, the memory module is configured as a multi-chip module.

Regarding claim 19, Brown shows in figure 6, the board (82) of the memory module is divided into a plurality of boards (80) and said plurality of boards are each connected by inter-board connection means (channel 20).

Regarding claim 45, Brown shows in figure 3, the bus line (at portion 26, 30) is approximately parallel to a short side of the memory module.

Regarding claim 46, Brown shows in figure 3, the bus line (at portion 26, 30) forms a right angle with a connector (22).

Regarding claim 47, Brown describes at column 5, lines 53-61, the terminals of the memory module are disposed on a front surface and a back surface of the memory module.

Allowable Subject Matter

5. Claims 9-10 are allowed.
6. Claims 7, 8, 15 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 25, 46, 49 are objected to for including deficiencies as set forth in the Claim Objections Section.
8. Claims 26-44, 48 and 50 are objected to for their dependency on claim 25.

Conclusion

9. The prior art made of record cited on Form PTO-892 is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son L. Mai whose telephone number is 571-272-1786. The examiner can normally be reached on 8am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

03-31-06



Son L. Mai
Primary Examiner
Art Unit 2827